

REMARK**Status of Claims**

Claims 11-26 were pending at the time of the office action. Claims 19-24 are withdrawn and claims 11-18, 25 and 26 remain for examination. Claim 18 is amended to identify it as a means for claim. At page one of the application, on lines 28 and 29, U.S. Patent 5,736,897 for A Low Input Signal Bandwidth Compressor Circuit With A State-Variable Pre-Amplifier that issued on April 7, 1998 to Paul Gagon, a common inventor was incorporated into the subject application by reference in its entirety. The incorporated reference shows an alternative to the state-variable pre-amplifier that is capable of meeting the functional requirements of the means clause in claim 18.

Drawing Changes

Figure 1 is amended to add reference number 32 to identify the transfer contact of switch 34. Reference number 32 is used in the specification at page 5, line 17.

Figure 2 is amended to move reference number 20 slightly to the left and to add reference number 24 to the output of the Bandpass filter 22. Reference number 58 is added to top input resistor of integrator 26. Reference number 59 is added to the operational amplifier in integrator 26. Reference number 50 is added to the operational amplifier in the Bandpass filter in phantom block 22. Reference numbers 40 and 42 are added to identify resistors in phantom block 22.

Figure 3 is amended to add reference number 20 to the output of block 18 and to add reference number 24 to the output of block 22. Reference number 28 is added to the output of block 26. Reference number 36 is added to the output of power amplifier 30. Reference number 34 is added above switch 34. Original Figure 1 shows the added reference numbers at the amended locations.

Figure 4 is amended to change reference number 70 to be 78 to be consistent with Figure 3. Reference number 115 is added above the mid-range input to the Summer 74.

In addition to the above description, copies of Figures 1, 2, 3 and 4 is provided in which the changes are shown in red for the convenience of the examiner. Replacement sheets are provided for Figures 1, 2, 3 and 4. The replacement sheets are labeled "Replacement Sheet" in the top margin. The marked up copies are labeled "Annotated Marked-up Drawings" as required by new rule 1.121.

Rejection Under 35 U.S.C. 103

Claims 11 - 18, 25 and 26 stand rejected under 35 U.S.C. 103(a) as being
5 unpatentable over Bohn (US 4,891,841) in view of Gagon, (US 5,736,897).

The Examiner rejects claims 11 - 14 and 18 and after characterizing the elements 80, 45 and 35 of Bohn in Bohn's Figure 1 the Examiner states that Bohn fails to show an input buffer.

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The Examiner then states that that Gagon teaches "an input buffer with a state-variable filter for providing buffering, compensation for high, mid and low frequencies separately and automatic balancing of the mid and high frequency signals. This input buffer could be used for receiving the signal from a tape player and compensating the 15 bandwidth imposed by the dynamic range of the tape. Thus it would have been obvious to one of ordinary skill in the art to modify Bohn's system by incorporating the buffer as taught in Gagon in order to modify and improve the signal from a tape player."

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The rejection is respectfully traversed.

Each of the independent claims, 11, 15 and 18 that remain in the subject application contain a limitation that is either equivalent to or similar to the following phrase found in claim 11 (as currently amended):

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a band pass filter having a predetermined Q,
[[responsive]] coupled to receive the buffered program
signal [[for providing]] and to provide an inverted band pass
boosted program signal

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The Bandpass filter in the subject application is identified by reference number 22. Bohn identifies his Bandpass filter with reference number 45, and at column 4, line 53 of the Bohn '489' reference, Bohn uses the phrase "BP = Bandpass filter 45 is inverting". Block 45 is therefore, Bohn's Bandpass filter.

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Figure 1 in Bohn shows that the input to the Bandpass filter 45 is connected to node 25. However node 25 is not "coupled to the buffered program signal" as recited in the above claim phrase. In the Bohn topology, the Bandpass filter 45 is used in the feedback path from nodes 25 to 84 whereas in claim 11, in the subject application, and in

the other independent claims in the subject application, the Bandpass filter 22 is not used in a feedback path but is, instead, used in a forward gain path to obtain a boost in the low frequency spectrum of the buffered program signal.

5 Referring to Figures 1, 2, and 3 in the subject application, note that the **input** of Bandpass filter 22 is coupled to node 16, where the buffered program signal is provided. The subject application states at page 5, line 29 that"

10 "The all pass phase inverter 18 has an input coupled to receive the buffered program signal at terminal 16"

At page 5, line 36 and on page 6, lines 5 through 9, of the subject application (as amended), the application explains that:

15 "The band pass filter 22 is connected to receive the buffered program signal from terminal 16 and amplify and phase invert a narrow range of low frequency of the buffered program signal to provide an inverted band pass boosted program signal to terminal 24[[],].

20 Therefore, the input to the Bandpass filter 22 at node 16 is the buffered program signal and the output of the Bandpass filter 22 at node 24 in the subject application is an "inverted band pass boosted program signal". Each of the independent claims in the subject application contains a closing phrase equivalent to or similar to the following:

25 "a summing amplifier for adding the inverted buffered program signal to the inverted band pass boosted program signal and for providing a composite output signal."

The above phrase shows that the summing amplifier 26 receives and adds the "inverted band pass boosted program signal" at node 24 to the inverted buffered signal.

30 However, the Bohn reference does not show the output of the Bandpass filter 45 connected to the input of the summing amplifier 35. Bohn connects the output of the Bandpass filter 45 to the slider pot in the **feedback loop**.

35 The Bohn reference uses a plurality of constant Q bandpass filters. Each of the filters is assigned to a frequency band and there is no means provided in Bohn for shifting the center frequency of any of the constant Q Bandpass filters 45. However, the invention claimed in the subject application provides potentiometer 54 on Figures 1 and 2 as a

means of moving the center frequency of Bandpass filter 22 to accommodate the speaker in use. In addition, the Bandpass filter is used to amplify the buffered program signal within its frequency band of interest. The Bandpass filter is not used to "cut" or attenuate the amplitude of the signal being processed as in the case of the Bohn topology.

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Since the Bandpass filter 45 of Bohn is not connected to receive the buffered program signal from the input buffer 12 and since the Bandpass filter 45 of Bohn is not connected in the feed forward path to the summer, applicant respectfully requests that the Examiner withdraw the rejection under 35 U.S.C. 103 because the Bandpass filter 45 of Bohn is not used in the same way, nor for the same purpose, as in the rejected independent claims 11, 15 and 18. There is no apparent suggestion in Bohn or in the '897' reference for the use of a Bandpass filter in the forward signal path for the purpose of obtaining a gain boost of the low frequency compensated signal Vlp component in the composite buffered program signal supplied at node 16 to Bandpass filter 22..

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In view of the arguments set forth above, the Patent and Trademark Office has not made out a *prima facie* case of obviousness under the provisions of 35 USC 103 and thus the rejection must be withdrawn.

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The referenced independent claims 11, 15 and 18 (as amended) are now believed to be in condition for allowance and allowance is requested. All remaining dependent claims depend from allowable independent claims therefore their allowance is also requested.

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Changes to Specification:

The specification was reviewed and numerous changes are incorporated to eliminate redundancies, and to conform the terminology for the Vhp, Vmp and Vlp signals to be "high frequency compensated signal", "mid-range frequency compensated signal" and "low-range frequency compensated signal" respectively.

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New matter has not been added. The claims are now believed to be in condition for allowance and allowance is respectfully requested. The Examiner is encouraged to feel free to call Applicant's attorney for the purpose of discussing any item relating to the prosecution which might lead to an early allowance.

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The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed

herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise
improper or informal or even entirely missing, the Commissioner is authorized to charge
the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed
for timely acceptance of papers submitted herewith, applicant hereby petitions for such
5 extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to
Deposit Account No. 19-0741.

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Respectfully Submitted,

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Annotated Marked-up Drawing
AN AUDIO BOOST CIRCUIT
P. GAGON 09/444,541

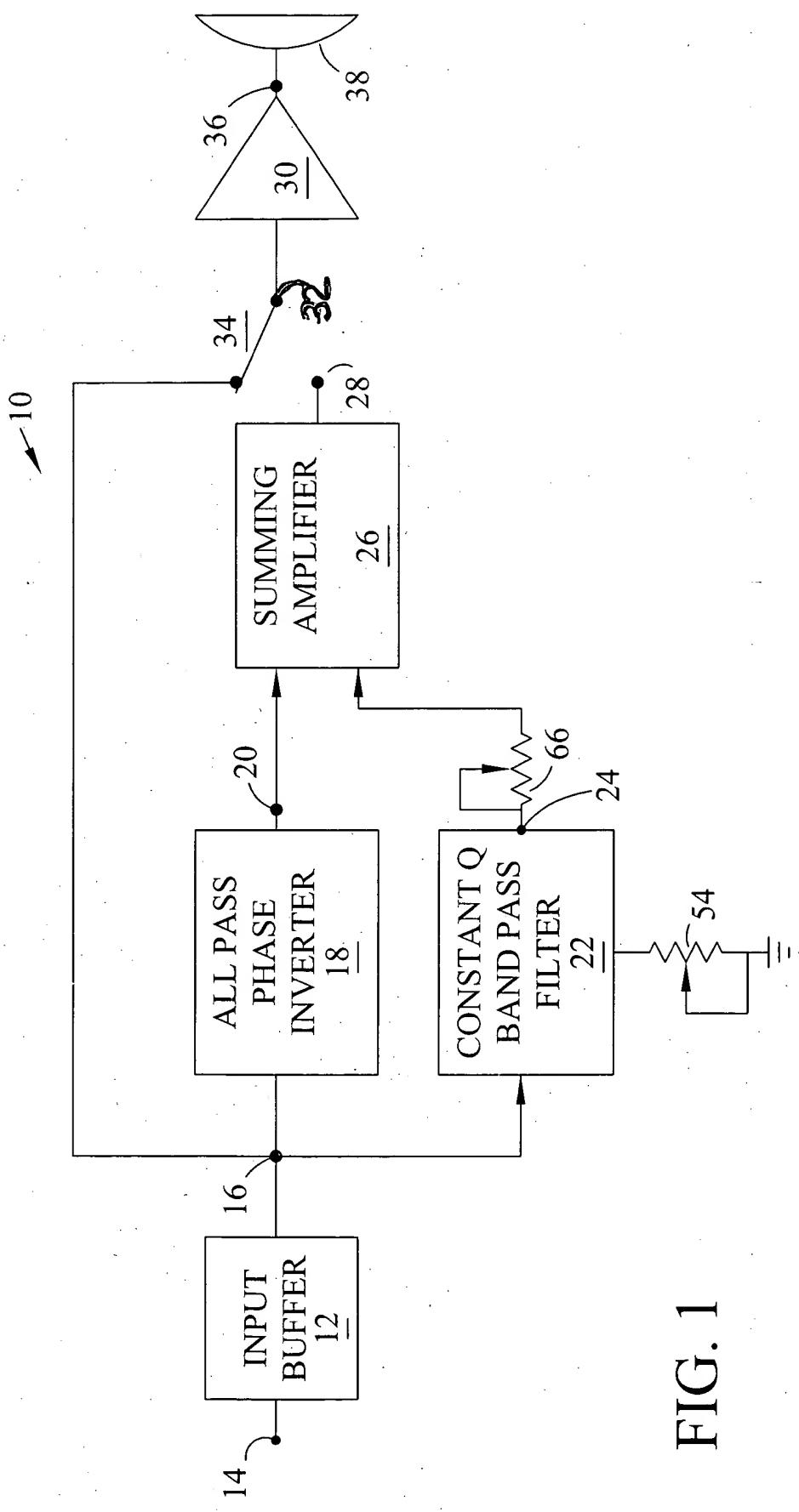
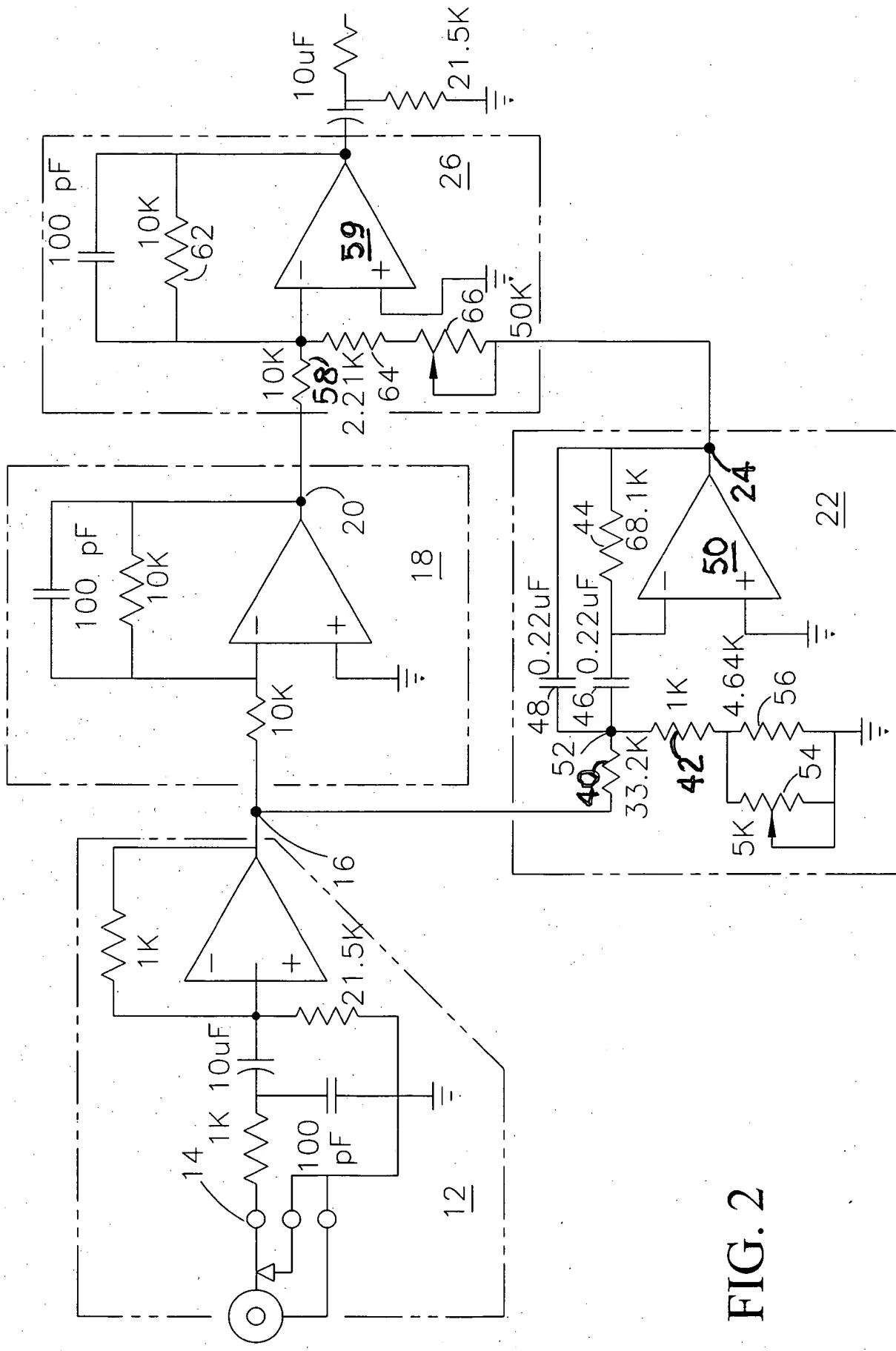


FIG. 1

Annotated Marked-up Drawing
 AN AUDIO BOOST CIRCUIT
 P. GAGON 09/444,541



Annotated Marked-up Drawing
AN AUDIO BOOST CIRCUIT
P. GAGON 09/444,541

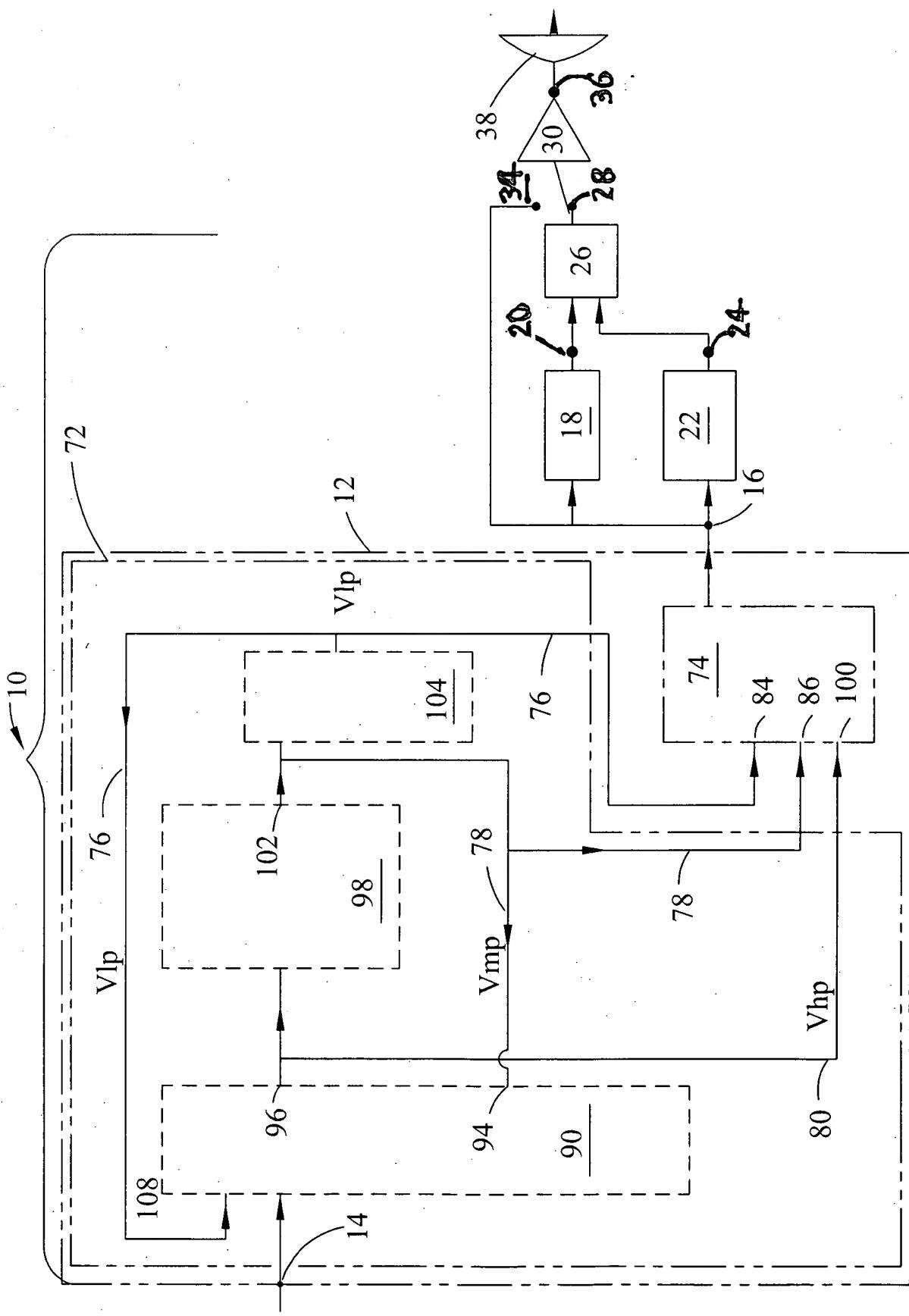


FIG. 3

Annotated Marked-up Drawing
 AN AUDIO BOOST CIRCUIT
 P. GAGON 09/444,541

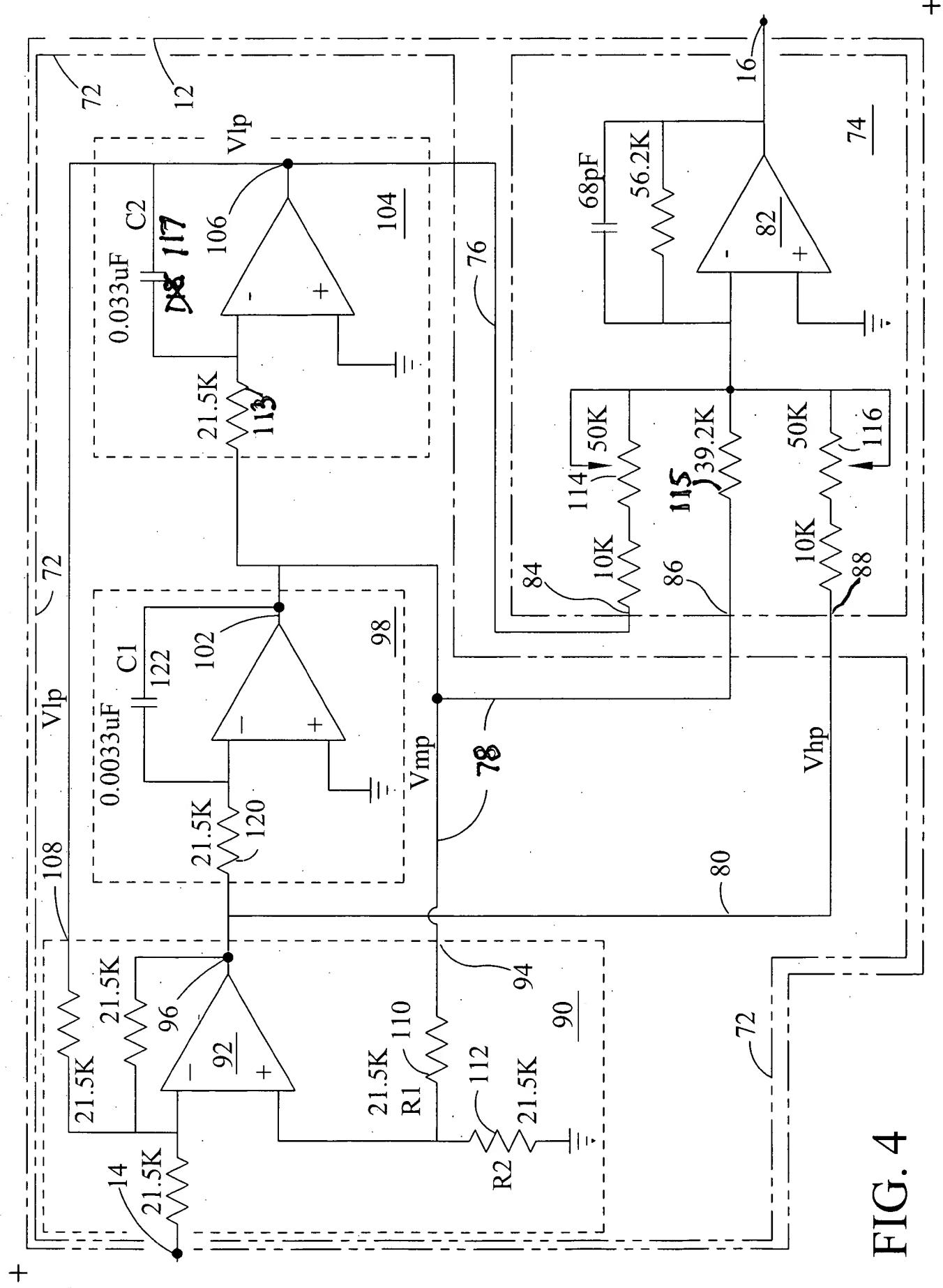


FIG. 4